

# MACDONALD COLLEGE JOURNAL



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Farm · Home · School

# Everywhere!



SINCE  
1858

## MACDONALD'S *Quality Tobacco Products*





## Why Not Contract for Feed Supplies?

No matter how good crop conditions may be for the rest of this season, Central and Eastern Canada will face an acute shortage of home-grown feed grains this fall. The only possible way to overcome this shortage is to bring in Western feed grain as quickly as possible. This calls for the co-operation of all farmers in placing immediate orders for all the feed grain they need for the season.

Unless this is done, many farmers are likely to find themselves out of feed before spring, with no alternative but to dispose of their livestock.

This season has thrown into bold relief one of the great weaknesses of present-day agriculture in Canada. We have considerable specialization without any real provision for it.

The present feed situation differs only in degree from what we have experienced for several years. With increasing specialization in livestock, the eastern half of Canada is depending more and more on the West for its feed supplies. But we have been doing very little to make sure that we get these supplies. In fact, we have been playing an all-out gamble. So far luck, in the form of the government, has been with us. But how long can we expect this luck to continue?

This is not an argument against specialization. There is no doubt that the West, with its more productive soil, bigger farms and greater mechanization, can grow grain considerably cheaper than the East. In fact, Eastern farmers are at such a disadvantage in the production of field crops that it might not pay them to grow grain at all if they could be assured of sufficient supplies of feed from the West, at prices they could pay.

The question of whether it would pay to buy all the feed grain for an Eastern Canadian farm hinges on the conditions on that particular farm, the price of grain, transportation costs and the prices for livestock products. And even if we know what these are today, they might all be changed by next year. So, even if farmers could depend on getting an adequate supply of grain

from the West, they could not afford to take too big a chance on the other counts.

That's one of the things holding back specialization on our farms. If we are not sure of getting the supplies we need from someone else, we are forced to grow them for ourselves. And not having good conditions for growing everything, nor enough time to devote special attention to anything, we are often inclined to do a mediocre job at a high cost.

A big manufacturer couldn't possibly operate that way. Take the automobile makers. Most of them have parts made by numerous smaller firms, to be assembled at the central plant. If the plant that made the steering wheels failed to deliver the goods, the main production line would be completely stalled. So the car manufacturer makes air-tight contracts with his parts suppliers, so that he can be sure that his lines will keep rolling.

Why should this idea not be applied to feed grain supplies, so that Eastern farmers could be sure of having the feed grain they need moved down from the West? Great Britain contracts with the Canadian Wheat Board for its wheat supplies. Could Eastern Canadian farm organizations not get together and make similar long-term contracts for feed grain, so they will be sure of having it when it is needed?

If this were done the Westerner would be assured of his market, so that he would produce the grain. And the livestock man, sure of his supplies and knowing his feed costs for several years ahead, could lay long-term plans for building up his production.

Something of this sort is needed to build up the security and confidence that Canadian farmers must have before we can reap more benefits from specialization, without taking the risk of proportionate losses.

### Our Cover Picture

The farmland scene used as a cover picture this month was taken near Waterloo, Que. by a C.N.R. photographer.

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## AGRICULTURE

*Articles on problems of the farm*

# Harvesting the Apple Crop

by A. N. Nussey

The way fruit is picked and stored often makes the difference between profit and loss in the orchard. Here are some hints on how to get the most from your apples.

TO get top price for his fruit the grower must not only produce high quality fruit, but must follow up with good harvesting and storage methods so that the consumer may obtain the fruit in high class condition.

Efficient harvesting methods are essential if the crop is to be marketed or stored in its best condition. All injuries sustained by the fruit during harvesting will shorten the storage life of the fruit later on. And the general appearance of the fruit and its container on arrival at the market has a great deal to do with the price it will command.

Some consideration should be given to the time of harvesting apples. It is a well known fact that apples, especially in the early varieties, are often marketed while still immature. As a result the grower receives lower prices, and future sales may be lost. The summer and fall varieties may be harvested whenever there is a demand for green apples for baking and cooking and when the apples have reached a marketable size. If the crop is heavy it will be necessary to begin the harvest before the fruit is at its best natural condition, since there is danger of excessive dropping and a sudden softening of some varieties.

There are several methods which the grower may use in determining the proper picking time for the later varieties. A pressure tester is now in use to test the maturity of the apple based on firmness of flesh. This is determined by measuring in pounds the pressure necessary to force a plunger of a given size a certain distance into the fruit, the skin being removed from the spot where the test is made. Size and colour must be considered, as they determine to a large extent the price of the product. The browning of the seeds, the ease with which the apple separates from the stem, and the eating quality of the apples are sometimes used as signs of ripeness.

Some commercial growers rely on changes in skin, colour and softening of the fruit as indications of ap-

proaching maturity. The green colour of the apple on approaching maturity will become a decidedly lighter shade. There are colour charts available for use with different varieties. Other growers wait until the apples begin to drop, and then harvest at once. In recent years hormone sprays have been applied to varieties which drop heavily at harvesting time, to hold the apples on the tree until picking is completed.

All necessary harvesting equipment should be put in order before harvesting begins. A good type of ladder for smaller trees is a three-legged stepladder of convenient length. The tops of larger trees can be reached with an ordinary pointed ladder. Only in extreme cases should pickers be allowed to climb trees.

A good picking receptacle is a metal picking bucket with a canvas drop bottom. This type of bucket is used almost exclusively in some areas, and is gaining favour in others. It is suspended from the picker's shoulders, allowing free use of both hands; the sides have sufficient rigidity to protect the fruit, and the bucket is easily emptied.



Loading applies for delivery to the storage plant. The initials on the orchard boxes stand for Roswell Thomson of Abbotsford, Quebec.



The padded basket type of receptacle has been used for many years and is still used to a considerable extent.

A most useful container for hauling fruit from the orchard is the orchard box which holds about a bushel of fruit. These boxes may be piled upon one another without injuring the fruit. They are quite rigid compared to hampers and prevent squeezing which would cause bruising of the fruit. The common method of hauling the apples from the orchard is with a team of horses or a tractor and a rubber-tired wagon or trailer.

The method generally followed in picking apples is to grasp the apple in the palm of the hand, using all fingers to hold it without bruising; then the apple is removed from the twig by giving it an upward and outward turn and twisting turn and twisting the stem with the apple and not injuring the remaining fruit

spur. The fruit is then placed carefully in the picking receptacle to avoid bruises and cuts. The picking containers are then emptied into the orchard boxes, avoiding unnecessary bruising.

Under Quebec conditions the apples are usually hauled from the orchard to the packing house where they are graded and packed in boxes, crates, bushels or hampers; they are then either sold to buyers or are stored in some large plant until sold later in the season.

In some fruit growing areas where there are local cold storage facilities, the apples are stored directly from the orchard and are graded and packed as they are sold. When this procedure is followed the delay between harvesting and storing is shortened, so that the storage life of the apples is prolonged and it is likely to reach the consumer in better condition.

## Want to Streamline N.S. Fairs

by John Snedden

THE Nova Scotia Livestock Council is out to improve the exhibitions in the province. It recently approved six proposals of its exhibition committee which, if carried out, will make a lot of improvement in fairs in Nova Scotia—as they would anywhere else.

The first proposal was that livestock judges be encouraged to give reasons for their placings. This would greatly increase the ringside audience and the educational value of the shows. And no judge who has a good reason for placing one animal over another should have too much trouble in telling why he did it. This procedure would, in fact, curb the criticisms that often arise when the judge puts down some animal that looks good from the ringside, but that carries some weakness that it takes a trained hand to find. Several N.S. fairs have already started having judges give their reasons, and the Council believes this system should be adopted by all the others.

Another proposal was that inferior animals should receive no prize higher than they merit. So, if a class contained no animal that could take top place under average competition the highest prize awarded would be second, or third, or whatever the top animal was considered worth.

This is a matter that calls for much more uniform standards of judging than have often been seen in the past. Before it can be handled very satisfactorily all the judges at exhibitions need to have very much the same idea of how good an animal must be to merit first place, or second place. It calls for a very definite

picture of standards in the judge's mind, on top of the ability to judge comparative excellence.

This need gave an added fillip to the demand for a judging school where an effort could be made to standardize judging. The need was already there, as the great differences between the placings of various judges has often confused both exhibitors and the public. How can a breeder decide what type is required, when an animal is placed up at one show and down at another, with the same competition and no apparent change in condition or fitness? That has driven many good livestock men off the show circuit.

If exhibitions are to have any real value, educational or otherwise, there must be some consistency in the placings, not only at one show, but from show to show and from year to year. There is a need to find what type of animal is required to do the job that class of stock is meant to do, and to see that all the judges fill their eye with that type.

To make this possible, the Nova Scotia Livestock Council decided to hold a course for judges at county exhibitions during the first week in July, with Prof. J. C. Steckley of Ridgetown, Ont., as instructor.

Another proposal was that certain livestock classes should be placed on display for part of the day after judging, so that people who weren't able to follow the judging could inspect the class in order of merit. There might be some complications in doing this; but if a show really wants to do a job it can reorganize its activities accordingly.



This proposal has a great deal of merit. It will give people a chance to look the classes over at their leisure and see why the judge placed them in the order he did. Of course, if he could be with the cattle while they were on display, to explain finer points to non-experts, it would greatly increase the interest and value of the show. But, in any case, farmers and young people would be able to look over a class of cattle that's better than they usually have a chance of seeing together, and to build up their own sets of standards from them.

The Council also proposed that registration papers should be carried in the ring by the exhibitor. This would get away from trouble that sometimes arises in regard to identity or age of an animal, particularly when the owner himself is not showing it. It would often speed up the judging, by making it possible to settle disputes on the spot in a minute, and would get rid of some uncertainty and dissatisfaction. However, much the same job could be done by having the clerks check tattoos or ear tags with the pedigree and the information on the judging sheet, when the animal enters the ring.

It was recommended, too, that R.O.P. classes be provided where there will be enough entries to justify them. That is a part of exhibitions that we have been inclined to overlook in this country. In Denmark and Holland, no dairy cow old enough to have a record is admitted in a show unless she has qualified in their equivalent of our R.O.P. And no dairy bull is admitted unless his maternal ancestors have officially proven their ability to turn out the goods.

Since a dairy cow is meant especially to produce

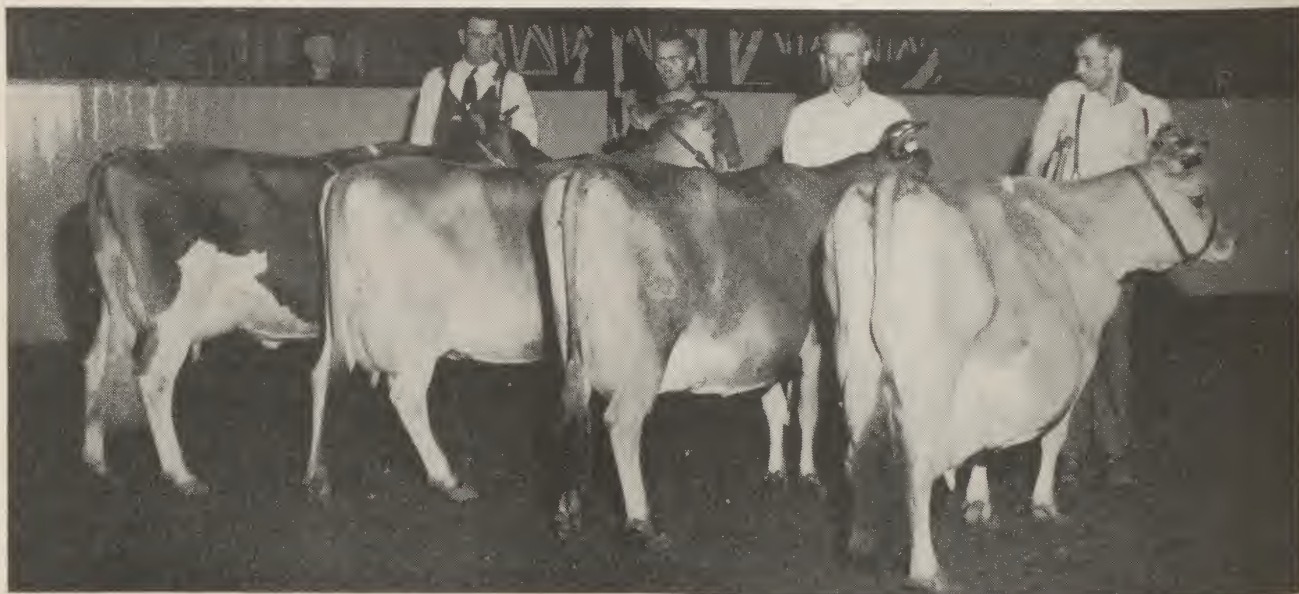
milk, she isn't much good for her job unless she does produce a reasonable amount—no matter how fine she may look. And if our shows are really to benefit the farmers of this country they need to encourage the breeding of cattle that will produce more milk or fat at less cost. So the provision of R.O.P. classes would just be a first step toward a much higher objective—of having nothing but R.O.P. classes for mature dairy cows.

It was also agreed that dairy cattle prizes should be paid according to a sliding scale. For small classes prize-winners would get only the amounts listed in the catalogue; but where four herds and 40 animals are entered the prize list would be increased by 25 percent.

It may be argued that this would discriminate against the small competitor; but there are arguments against this point of view. There is no doubt that it costs a great deal to enter a complete herd. If a show is to go forward speedily and smoothly one man must be getting one animal ready while a second man has the first animal in the ring. And in group classes the labour problem is greatly complicated.

Also, it is undoubtedly worth more to win a herd class including 40 or more entries than to top a single class with only two or three out. So this increase in prize money should have some effect in encouraging larger entries.

So, on the whole, the Nova Scotia Livestock Council is to be congratulated for taking the leadership in improving exhibitions. If the shows will follow the Council's recommendations, and throw in a few improvements of their own, they'll get a lot more public support.



The top Jersey cows in milk at the Maritime Winter Fairs, shown by Jas. Norrie, Truro. The N.S. Livestock Council has some good ideas for improving these fairs.



# There's No Such Thing as PTOMAINE

by C. E. Chaplin

It was just a handy word, to describe something that wasn't properly understood. But there's still food poisoning to be guarded against by pasteurization and careful canning.

EVER since man first appeared on the earth he has had to struggle for food. As long as he was a hunter, and lived in the midst of his food supply at all seasons he was able to eat his food fresh. His was a club-to-mouth existence.

But when specialized trades developed, and man moved to inclement climates, no one but the producer of foods could be sure that what he ate was fresh and wholesome. It would not have been possible to build up our present complicated civilization if ways had not been found to preserve fresh food where it is produced, so that it may be stored for long periods and transported over great distances for distribution in areas where it cannot be produced.

Modern canning originated in France in 1807, when Napoleon was seeking means to keep his armies provided with food that was neither salted nor smoked. The method that won the prize was that of placing the food in stoppered jars and boiling it for some time — essentially the method used today.

The ingenious inventor of this process did not know why his system worked. He blamed air for food spoilage. He thought that if he drove out the air by boiling, and kept it out by corking that was all that was necessary. It was not until many years later that food spoilage was associated with the growth of bacteria, and that food poisoning became known, incorrectly, as ptomaine.

Digestive upsets may be caused by several types of food poisoning. Poisonous plants, animals and chemicals, though they may be severe in action, do not often cause trouble. Bacterial poisons and infections arising from foods contaminated with bacteria are responsible for the majority of outbreaks of food poisoning.

It is generally believed that food poisoning is necessarily associated with putrefaction of the food, though this can hardly be the case when such a delicacy as Limburger cheese owes its distinctive flavour to the growth of an organism that causes putrefaction; and besides, putrefaction makes the food unpalatable long before it is dangerous to eat.

On the other hand improperly processed foods, possessing no odour nor other sign of spoilage, may contain bacterial toxins and cause food poisoning. The taste of these foods arouses no suspicion in the mind of the

victim, but in a few hours he has a severe attack of nausea, vomiting, diarrhea, and abdominal cramps. The patient, when questioned, would find it difficult to admit that his distress was caused by something he ate.

What has happened is this; the organism responsible has, because of some fault in the processing or storage of the food, been able to produce a certain amount of poison or toxin. When this food is eaten it does not matter if the responsible organism is alive or not, the toxin is still there and able to do its damage.

Botulism is a well known form of food poisoning differing somewhat from the others. It takes perhaps two days for the alarming symptoms to develop; then difficulty in speaking and breathing develop, accompanied by double vision. The organism that causes botulism can grow in the complete absence of air, and it is therefore possible to find it in canned vegetables that have not been sufficiently cooked.

Because of outbreaks of botulism during the war of 1914-1918 a great deal of research in commercial canning was done during the following years, and, as a result, since 1925 there have been no outbreaks of botulism originating from commercially canned foods. Home canning methods, however, are not always as thorough, so cases still occur as a result of insufficient heating in preparation.

The botulism organism, besides being able to get along very well without air, has a nasty habit of being

## Germ Sneeze Poisoned 50

### Finding Given on N.S. Lobster Party

**HALIFAX** June\* 16—(C.P.)—A staphylococcus-laden sneeze or cough probably caused the mass illness of 50 persons at the Wednesday night lobster and cream puff supper of the Tangier Anglican Deanery Men's Association, the Provincial Department of Health reported today.

Fifty persons were taken violently ill after the outing at Oyster Pond, 15 miles from here, but all recovered.

The Department said the lobster had been contaminated by a disease-producing organism known as staphylococcus, which can be carried in the nose or throat of individuals without them showing symptoms of disease.



difficult to deal with. It changes its normal easily-killed cell into a spore which can resist heat that will kill almost all other bacteria. Consequently, extra heat treatment must be given to be sure that all the spores have been killed so that the food will be safe to eat, even after being stored some time.

The danger from these organisms arises from food that is not normally cooked before eating, such as oysters, or that is handled following whatever heat treatment they receive — for example, foods containing whipped cream.

Outbreaks of this nature are generally in a restricted group, and are regarded as newsworthy, as can be seen by the clipping from *The Montreal Daily Star*. This news item also illustrates how the food may become contaminated; in this case it was supposed by the Provincial Health Department that a cough or sneeze had sprayed the lobster meat with sufficient *Staphylococcus* that, with the few hours before the party, enough toxin had been produced by this organism to make 50 persons uncomfortably ill.

Rats, mice, and flies may also infect foods.

It might be as well to consider the condition known as Summer Diarrhoea while we are on the subject of food poisoning. This is a contagious ailment that is particularly severe among children under two years of age, but attacks far more adults with only minor effect.

Very little is known about the cause and spread of summer diarrhoea. Various bacteria have been blamed by the workers of Germany, France, England, and North America but no agreement has been reached. What is known is that every summer, as soon as a certain minimum temperature is attained, summer complaint makes



Commercial canners have learned how to keep their products wholesome; but home canning still has room for improvement.

its appearance. It resembles a mild dysentery in adults but is a severe disease in children. It takes a similar form in all countries that report its occurrence, but probably different bacteria are able to cause it. It is almost certainly caused by contaminated food, or milk, or water; and flies probably aid in spreading the disease.

Personal cleanliness and scrupulous attention to detail in the preparation and protection of food and water will go far towards controlling both food poisoning and summer complaint.



The mighty jeep, equipped as a fire engine, stands up to its axles in water and supplies a strong stream from two hoses. The chassis is a standard jeep with a specially designed fire engine body; the pump capacity is 375 gallons per minute at a pressure of 120 pounds. The purchase of a jeep fire engine by rural communities is a project that might be worth investigating.

When a young chap in an office said he was going to get married, three of his fellow-workers decided to get him a wedding present. One of them knew of just the thing—a fine set of dishes he'd noticed in a store, selling for \$45. The others agreed and each chipped in \$15.00.

They called the office boy, gave him the money, and told him exactly what to get. When he reached the store, he found that the price had been reduced to \$40. "That's a break," he said to himself. "I'll keep \$2 for myself and these chaps will still get a bargain. So he delivered the dishes and returned \$3.

Now, try to explain this. Originally, each of the three men gave \$15 and now each got \$1 back, so that each had only paid \$14 or a total of \$42. The office boy kept \$2. This adds up to \$44. What happened to the other dollar?



# Our Cheapest Feed is Water

THE cheapest feed we have is water. It is rather unusual to consider water as a feed; yet animals can live much longer without solid food than they can without water. And to make full use of their other feed they need vast quantities of water.

The vital importance of water to the animal body is shown by the fact that, while an animal can lose practically all its fat and half its protein and still live, a loss of only one-third of the water in its body results in death.

Here are the water requirements for some of our farm animals, as described by G. C. Ashton of Macdonald College in Milling and Feed:

Cows under average stabling conditions will drink about 75 pounds of water daily — and more in summer. In addition, high-producing dairy cows use from three to five pounds of water for every pound of milk produced. So a cow giving 40 pounds of milk a day should have 120 to 200 pounds of water — equivalent to 12 to 20 gallons. Dairy cows with constant access to water will drink more of it, and produce more milk, than those watered only once or twice daily.

Calves will drink from  $7\frac{1}{2}$  to 8 pounds of water daily per 100 pounds of body weight. Nor does the feeding of milk eliminate the need for water. Where calves are given as much water as milk they may gain weight a third faster than when milk is the only liquid they get.

The average work horse, under ordinary conditions, will drink from 60 to 100 pounds of water daily. But considerably more than this should be provided if the animals are at steady work in warm weather. Under these conditions they should not be allowed to drink too much while still hot, but should be given a good drink once they have cooled off.



Cows drink 75 pounds of water daily, plus what extra they need for high milk production.

Animals contain so much water, and suffer so much from lack of it that they aren't able to make good use of other foods unless they have plenty of water. Besides, this precious liquid has numerous other jobs to do in the body.

For market hogs, the general rule is 3 pounds of water per pound of dry feed. But milking sows need considerably more than this. Sheep will usually take 10 to 12 pounds of water a day. Laying hens will take from 35 to 45 pounds of water daily per 100 hens.

There is good reason for these high levels of consumption. Water makes up a large part of the animal body and its products. Young animals are nearly 75 percent water. Milk is 87 percent water, and eggs 60 percent.

Farm animals also need large amounts of water to dilute waste products, remove them from the tissues and finally excrete them in the urine. In poultry these products are excreted as a solid, along with the droppings, so that birds are less sensitive than mammals to a temporary lack of water. But this lack cannot be continued for long before they, too, will begin to show its effects.

Here is the way water works in the animal body. Before food can be absorbed by the body cells it must be changed into a suitable form. That is what takes place in digestion, where water plays a major part.

Water's importance in digestion is that it is very adept at dissolving things, and helps speed many chemical reactions. But it has another very important function — absorbing heat rapidly. During digestion chemical changes in the food give off a great deal of heat, which must be absorbed—and water does the job.

Nor is digestion alone in producing heat in animals. If the heat produced by an animal's strenuous muscular effort for 20 minutes were not promptly gotten rid of it would cook the proteins in the body like a hard-boiled egg. It is water that gets rid of this dangerous heat.

Water forms a big part of the joint fluid, and also of the spinal fluid which acts as a cushion for the nervous system. In the ear it transports sound, and in the eye it helps animals to see. In the urine, it dissolves the mineral and nitrogenous products of digestion.

Since animals depend on water for all these vital jobs it is not hard to see why they suffer when they don't get enough to drink — especially in hot weather, when their needs are greatest. The simplest way to see that an animal has a chance to make good use of its food is to see that it has a constant supply of clean, fresh water.



# The Loyalist Spirit Lives On

A full-fledged farmer at 13, a prize-winner in Canada's first seed grain contest, and honoured with the highest award of the Canadian Seed Growers' Association, Robert MacKay of Maxville, Ont., still spurs on farm organizations to new achievements.

by J. S. Cram

WHEN Robert MacKay was only 13 he had to start running the farm. His father had died in 1889 when the boy was five, and a brother carried on for eight years then he, too, passed out of the picture. Robert was left with the land deeded to his United Empire Loyalist grandfather in a document that reads:

"George the Third, by the Grace of God, of Great Britain, France, and Ireland, King Defender of the Faith, and so forth . . . does by these presents give and grant to Daniel McKay and his heirs and assigns forever . . . 200 acres . . . in Kenyon township in the County of Glengarry, Upper Canada."

This remarkable document is dated 1797, the year that Daniel McKay arrived from the United States and started to hack a home for his family from the wilds of Glengarry, just outside Maxville. His son followed him on the land then dying an untimely death, passed it on to his sons. So it was that Robert, at the age of 13, found himself a full-fledged farmer.

It was heart-breaking work for a 13 year old. The soil was not too fertile or too well drained, and needed coaxing to grow a crop; and the climate was just as unpredictable as it is now. There were few bright spots during the first three years.

Then Robert got a letter from his aunt in Montreal. She said she had heard of a seed growing competition, and suggested that he enter it. That was in 1900.

Robert wrote to Ottawa, to Dr. James Robertson, Commissioner for Dairying and Agriculture, asking for information about the contest. He got a prompt reply. Boys and girls were to grow quarter-acre plots of grain, and pick enough of the largest heads from the most vigorous plants to sow another quarter-acre plot the next year. Again the hand-picking was to be carried on, and another quarter-acre seed plot planted. But then the seed from that third year's crop was to be entered in a competition for what seemed like magnificent prizes.

The idea appealed to the boy, and he put in a special quarter-acre plot of Red Fife wheat. Carefully he followed the instructions from Ottawa, watching the plants develop and deciding which ones to select the

seed from. He had all the other farm work to look after; but this was a real labor of love; his heart was in it. And it was with genuine pride that he showed friends the seed he had selected for his next year's plot.

But three years — that's a long time to wait for positive results. There was a lot of other work to do, and the seed plot took considerable extra time. Robert began to get discouraged. He wrote to Ottawa, telling the competition officials of his troubles, but they encouraged him to keep going. So he carried through right to the end, along with 450 others who finished the third year. They were what remained of 1,500 original entries.

But Robert was glad he had stuck with it. When the seed had been judged, his placed third for Ontario and eight for the whole dominion. And with this encouragement he was properly launched on a long career of growing good seed and encouraging good farming. When the contestants in the Macdonald-Robertson Seed Growing Competition decided to form a Canadian Seed Growers' Association he was in Ottawa for the first meeting on June 15, 1904. He has been an ardent supporter of the association ever since.

And his activities did not stop at seed growing. The year he entered the competition, when he was only 16, Robert was elected a director of the Glengarry Farmers' Institute. Ever since then he has been in wide demand throughout Ontario as a judge at seed fairs. He has done his own share of showing, winning eight red ribbons in 10 years at the Guelph Winter Fair. He always showed Red Fife, and never selected a head that bore less than 80 kernels. The last year that he showed



Mr. and Mrs. Robert MacKay at their home in Maxville, Ontario, where Mr. MacKay has boosted good seed for almost 50 years.



his entry was selected for the Canadian exhibit in Great Britain.

He has spurred on the movement for better crops, particularly around his own county, where he has been particularly active in the Glengarry Crop Improvement Association, having been president for several terms. He has also been an aggressive president for almost every agriculture organization in the county.

Nor does Robert MacKay lack interest in activities that are not agricultural. He has always taken an important place in the civic life of his community, and is the guiding spirit in quite a number of local enterprises.

In 1929 his health forced him to leave the farm. But that didn't stop his activities with farm organizations. As he says, it gave him more time for work in crop improvement.

Finally, in 1929 Robert MacKay's services were acknowledged by the Canadian Seed Growers' Association when he was made a Robertson Associate — the

highest honour the association can bestow on a member. So he became one of those men of whom Dr. L. H. Newman, Dominion Cerealists, said when the award was first made in 1931:

"These gentlemen belong to a class which requires no monuments, no bronze plaques, no stained glass to commemorate their accomplishments; for they have carved their names deep in the agricultural history of the Dominion and Canada is a better country because they lived."

This year, when the seed growers met at Macdonald College, Robert MacKay was ill, and unable to be there. But though he was down he was far from out, and he is now well on the way to recovery. His interest in public affairs has not flagged, and he's looking forward to getting back into harness before long.

As he says, with his infectious grin: "There's plenty of life in the old dog yet — and our crops can still stand a bit of improvement."

## Poultry Questions Answered

**Q.—Is dried alfalfa hay a satisfactory forage for range-grown turkeys?**

**A.—**Alfalfa forage, either green or dry as hay, is greatly relished by growing turkeys. Rangeland birds will relish the fresh forage, either standing or fed out in racks close to the feed hoppers and roosts.

Dry alfalfa hay will be eaten eagerly out of the bale or when placed in racks.

Porch-grown poults also relish a daily supply of fresh green or dry forage. The only disadvantage in feeding raked hay in the porch is that stems may be left on the floor to gather droppings. The racks for forage may be hung to the wire sides outside the porch.

**Q.—How do the different breeds of turkeys vary in the percentage of breast and leg meat?**

**A.—**The amount of breast and leg meat varies in relation to total meat on the carcass of the different breeds. Body form makes the difference. Selection for broader breast and shorter legs has resulted in heavier muscle development.

There is also a definite difference between the sexes, the males having a larger percentage of meat in breast and leg.

The weight of the carcass also bears a specific relationship to the yield of cooked edible meat. In males the heavier carcasses produce the highest percentage of edible meat and the most breast meat. With females the results are the same on the basis of total edible meat, but the reverse as to percentage of cooked breast meat, since the smaller carcasses produce the highest amount of breast meat.

### Per Cent Breast and Leg of Total Edible Meat

Broad Breasted Bronze (males) .....	70.2
Broad Breasted Bronze (females) .....	66.7
Standard Bronze (males) .....	64.1
Standard Bronze (females) .....	61.1
White Holland (males) .....	62.7
White Holland (females) .....	60.2
Beltsville Small White (males) .....	63.6
Beltsville Small White (females) .....	59.4

(Reference: M. A. Jull, Turkey World, Oct., 1946)

### Per Cent Yield Cooked Edible Meat and Breast Meat

Dressed Wgt. Lbs.	(Males)	Breast Meat
	Total Edible	
32	52.2	21.6
28	50.3	20.3
24	48.3	18.8
20	45.5	16.9
16	41.2	13.8
	(Hens)	
22	47.7	15.5
18	46.7	16.1
16	45.6	16.3
14	42.9	17.1
12	43.3	17.5
10	41.0	19.0
8	37.5	20.0

(Reference: L. E. Cline, U.S. Egg & Poultry Magazine, June, 1947)





## GO-OPERATION AND MARKETING

*A page of interest to members of farmer's co-operatives*

### Co-operative Poultry Abattoir Opens at Victoriaville



Planned to open for business this month the impressive new Co-operative Poultry Abattoir at Victoriaville is nearing completion. The building, which will cost nearly a quarter of a million dollars, is of fireproof construction and modern design. When in full operation the plant will serve three purposes: (1) to candle and store eggs, (2) for killing and packing poultry, (3) as a poultry hatchery.

The modern abattoir will have a capacity of 4000 birds a day and it is expected that it will be possible to handle as many as 6000 in the peak of the season. Some birds will be sold whole, others will be eviscer-

ated to meet the increasing demand for poultry by the piece.

The plant is owned by 21 local co-operatives and will serve an area of fifty miles radius from Victoriaville. Over a million chickens a year are raised in this area. New poultry co-operatives are being organized and it is expected that the number served will be increased to 30 in the near future. The plant will employ 40 workers.

J. A. Chagnon, a Master of Science in Marketing from Cornell is the Manager.

### P.E.I Co-ops Save Over \$50,000

Reports submitted at the annual meeting of the Co-operative Union of Prince Edward Island revealed a membership of more than 6,000 among the island's co-operatives. Net savings amounting to \$54,190 were effected by 18 co-operatives reporting. Their combined net sales came to \$1,836,221 for the year ending January 31, 1947.

In his presidential report, Jerome O'Brien, of Morell, reported that all of the island's co-ops had increased their membership, assets and turnover, and four new co-operatives had been established in the year under review. Another "eight to ten" new co-ops could be expected to take shape before the next annual meeting.

#### Credit Unions Growing

One person in every ten in P.E.I. is a member of a credit union, according to a report submitted to the P.E.I. Credit Union League at its annual meeting held

in Summerside on July 10-11. Of the 52 credit unions on the Island, 46 sent delegates to the meeting. The report of League President J. G. Dennis showed that total assets of the credit unions had passed the half-million dollar mark; over 2500 loans totalling 1½ million dollars had been made to members.

### Asbestos Co-op Stores

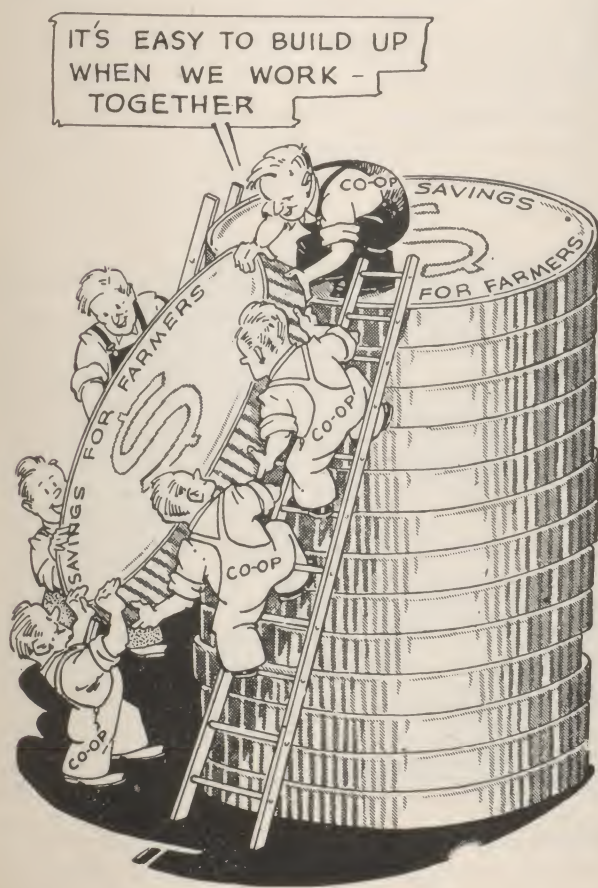
Asbestos has a thriving consumer's co-operative which operates two general stores handling groceries, meat, dry goods and shoes. Organized in 1940 the co-operative has now over 500 members. The original store is valued at \$165,000. The second store was opened in November 1946 and is valued at \$29,000. About 23% of the business done is with non-members. Felise Fontaine is the manager.



## Co-ops Are Equitable Associations

Since cooperatives are organizations of persons who have developed a business to serve themselves on a net cost basis, they endeavor to treat fairly every member and patron. Not only does this require charging each patron, members and nonmembers alike, fairly for the service rendered him, but it includes refunding each patron any over-charge that is shown by the audit report to have been made when the patron was first billed. Cooperatives cannot estimate their expenses exactly when they determine their charges, so they refund the over-charge on an equitable basis according to the volume of business each patron does with his cooperative.

The principles of honesty and uprightness which underlie cooperative business likewise require just treatment of all employees and persons with whom co-operatives have dealings. Employees should be paid liberally in proportion to the value of their services. In a nonprofit cooperative, equity and fairness forbids the members making any profit on the business done with nonmember patrons who should have their uniform patronage refunds credited toward the capital subscription required of members. What is equitable in the operations of cooperatives changes with the evolution of our economy, but the basic principles of fair treatment and justice to everyone always prevail.—Gordon H. Ward, Agricultural Economist, Virginia, Va.



## Market Comments

A recent cabinet decision was to continue the bonuses on field grains until ceilings on meats are discontinued.

Suspension of purchase of Canadian poultry by the British Government has been announced. The poultry trade now seeks to dispose of 2,000,000 birds in the United States.

### Dairy Records

For the three months March to May, 1947, sales of fluid milk in Ontario fell off 7.7 percent, compared with the previous year.

The retail price per quart averaged 15.2 cents in 1947, contrasted with 10.3 in 1946, an increase of almost exactly 50 percent. The retail value of the 7.7 percent less volume was over \$5,000,000 more than the 1946 value, an increase of 43 percent.

Decreased consumption of fluid milk has left a larger surplus for manufacture. This combined with smaller cheese output and good pastures to ease the butter situation. Storage stocks of butter at the end of July were well above those of last year, and it is not expected that butter rationing will need to be resorted to for the coming season.

## Trend of Prices

	July 1946	June 1947	July 1947
<b>LIVE STOCK</b>			
Steers, good, per cwt. ....	\$ 13.75	\$ 15.18	\$ 14.75
Cows, good, per cwt. ....	9.95	11.90	11.70
Cows, common, per cwt. ...	7.45	9.65	9.20
Canners and cutters, per cwt. ....	6.40	8.30	7.48
Veal, good and choice, per cwt. ....	14.65	15.05	15.62
Lambs, good, per cwt. ....	15.10	10.98	17.17
Bacon hogs, B-1 dressed, per cwt. ....	21.80	21.88	21.88
<b>ANIMAL PRODUCTS</b>			
Butter, per lb. ....	0.40	0.50	0.51
Cheese, per lb. ....	0.23	0.26	0.26
Eggs, grade A large, per doz. ....	0.47	0.38	0.39½
Chickens, live, 5 lbs. plus, per lb. ....	0.29½	0.30	0.28½
Chickens, dressed, Milk-fed A per lb. ....	0.37	0.38½	0.38½
<b>FRUIT AND VEGETABLES</b>			
Apples, B.C. Winesaps, per box ....	...	4.00-4.10	...
Potatoes, Que. No. 7, 75 lb. bag ....	2.15	...	2.00-2.25
<b>FEED</b>			
Bran, per ton ....	29.00	...	30.25
Oil meal, 38 per cent, per ton ....	...	45.25	45.25

### Maritime Co-operative Service

A change of name is reported for the Canadian Live-stock Co-operative, Moncton, N.B. It is now to be addressed as the Maritime Co-operative Service, Ltd.





## DEPARTMENT OF AGRICULTURE

*Activities, Plans and Policies of the Quebec  
Department of Agriculture*

# Cutting Costs in Farming

by Ivan R. Bierly

Assoc. Professor in Farm Management, N.Y. State College of Agriculture

THE kind of a living that a farm family enjoys depends on the amount of the difference between receipts and expenses. This difference in turn, depends primarily on three things:

- (1) The prices received for the products of the farm. The outlook is for less favorable markets and lower prices for farm products in the years ahead. Most of the farmers in an area sell the same product at much the same price. Important as it is, the individual has virtually no control over this factor.
- (2) The cost per unit of production. The outlook is for higher costs in relation to selling prices. Farm cost studies have always shown a wide variation among farms in unit production costs. Also, the lowest-cost producers almost always make the most money. Herein lies the greatest challenge to each individual farmer in the years ahead. The problem of cutting costs will be, in many cases, one of further substituting cost items which have increased in price the least — such as machinery and fertilizer — for those which have increased the most — especially labor.
- (3) The amount produced per man. The greater the output per man, the more times is the profit margin per unit of product multiplied — and the greater is the difference between total farm receipts and total farm expenses. Since labor is the largest single cost item over which the farmer has some control, a high output per man is needed to produce at low unit cost.

Studies of farm businesses, including the way that work is done, have shown how some farmers have saved labor and increased production per man. These studies show that the financial success of each individual farmer depends, for the most part, on how far he has progressed toward finding the best possible answers to the following four questions.

Can you cut unit costs by increasing production per animal and per acre? This raises all of the questions involved in the development of improved breeding, feeding, fertilization, disease and insect control programs, and a host of others.

Can you cut unit costs by enlarging the farm business to make full use of available labor? In farming as on any job, it is not possible to make a full-time income on a half-time job. But in the years ahead it will be speculative to enlarge beyond the point needed to get the greatest output per man. Also, the employment provided must be productive, not merely to fill in all the hours of each day, since compensation is related to output and not necessarily to the number of hours worked.

Can you increase net returns by substituting more profitable enterprises for some of those you have? Some enterprises usually pay better than others in a given area.

Can you cut costs by finding and making use of ways to do each job with less labor? Studies of farm businesses have always shown a wide variation in the amount of productive work accomplished per man, or in the amount of labor required to produce a unit of product.

The introduction of labor-saving equipment has made marked reductions in the labor required per unit of many crops, and has also saved much labor in doing some chore work. But many farm jobs, particularly certain chores, have not yet been mechanized. Even where machines have been provided, there is the problem of organizing the work and developing methods that use fully their labor-saving potentialities.

Time and travel studies of work methods, use of equipment, organization of work, and building arrangement have begun to show some of the reasons for differences between farms in the amount of productive work accomplished in a given amount of time. An example from a study of dairy chores is given for illustration of the results from a wide range of studies of important farm jobs.

In a study of dairy chores in progress at the New York State College of Agriculture at Cornell University, it was found that on one dairy farm the two men who did the chores each spent one extra hour a day in caring for a 20-cow herd, and walked almost 2 extra miles, compared with the men on another farm with a similar-sized herd and labor force. A milking machine



with two single units was used on each farm. These differences were due entirely to an accumulation of small savings on each of the many operations performed in milking, feeding, cleaning the stable, and caring for the young stock on the second farm. And the workers on the first farm actually moved faster while at work than those on the second farm.

Saving one minute per cow at each milking is 40 minutes a day on a 20-cow herd — over a year, that means saving 10 days' work. A bushel of silage carried to each of 20 cows twice a day for 6 months is 7,200 trips to the silo chute. A feed cart may save up to three-fourths of this walking.

Here are some questions that may help to show you where time and work may be saved:

**Milking** — Can you adopt a faster and better milking procedure? (Milking and care of milk account for about one-half of the total chore time.) Speed up or eliminate hand stripping? Arrange the cows in the order that they are to be milked? Rinse teat cups at the same time that milk is poured from the milker pail? Eliminate pouring from the milker pail by changing the head to an extra milker pail? Locate the milkhouse to save steps? Arrange the equipment in the milkhouse more conveniently?

**Feeding** — Can you use feed carts? Fill the silage cart directly from the silo? Locate hay chutes to minimize carrying hay? Keep small tools where they are needed?

**Cleaning and Other Chores** — Can you arrange to have the cows fall out so you can drive through when cleaning the stable? Keep young stock in pens instead of individual stalls? Arrange the stable to minimize needless walking, and to provide more convenient and compact work centers?



With careful planning, chores on a dairy farm can be cut down a good many days a year.

## Agronomes Pass Resolutions

The Corporation des Agronomes de la Province de Quebec, at the annual meeting last month at Rimouski, adopted a number of resolutions of interest to agriculturists in the Province of Quebec. Among them were the following:

**Automobile Insurance** The Provincial Government was asked to study the question of automobile insurance in an effort to determine why premium rates are so high in this province, and to determine what action should be taken to improve the situation.

**Instruction in Agriculture** As it is recognized that farmers' sons should get all possible training, the Corporation once again asked the Provincial Government to expand its programme of agricultural training through the establishment of more agricultural schools, and by the improvement of equipment in the existing schools.

**Research** Realizing the importance of research in agricultural lines, it was decided to reorganize the Committee on Research and Education so that the different branches of agriculture could be fully represented. The Committee was also asked to study the problems of research in view of suggesting a more active and better co-ordinated programme to meet the needs of Quebec agriculture.

In connection with the foregoing, the Corporation expressed appreciation of the fact that a Research Board has been organized by the Quebec Department of Agriculture, and suggests that the personnel of this board include a representative from each of the agricultural colleges in Quebec, one from the U.C.C. and one from the Corporation des Agronomes. It was also noted with appreciation that the U.C.C. had presented a brief to the Government stressing the need for the organization and further support of research in agriculture.

## Director Appointed for Provincial Veterinary School

Dr. Gustave Labelle, St. Eustache, has been appointed Director of the newly-organized Provincial Veterinary School.

The new director received his training at the University of Montreal, graduating as M.V. in 1919. Since then he has been practising his profession at St. Eustache and is well known among the breeders of that area. He has been Professor of Veterinary Science at Oka for many years, and was in charge of studies of the Oka Veterinary School until it closed last month.

Dr. Labelle is now engaged in organizing the new veterinary school, which will be located at St. Hyacinthe.

## A New Kind of Co-op

Angora rabbit breeders in Ontario are organizing a co-operative for processing and marketing Angora wool.



## Agricultural Merit Judges

By the time this issue is in the hands of our readers, the experts who are judging farms entered in the Agricultural Merit Competition will have almost completed their task in District No. 3. This includes fifteen counties on the South Shore from Nicolet to Temiscouata, the Isle of Orleans and a few parishes in the vicinity of Quebec City.

Of the 100 farmers who entered the contest this year, 12 are candidates for the title of Commander of the Order. More entrants would probably have registered this year had it not been for the fact that labour shortages, delayed seeding and other causes made a number decide that it would not be worth while.

As usual, the awards will be made at a special banquet during the course of the Quebec Fair on September 3rd, the day traditionally set aside as Agricultural Merit Day.

Judges who will decide this year's winners are Philibert Audet, Compton, who won the Gold Medal in 1946, J. A. Foley, St. Thuribe, M. L. Carr, Huntingdon, Dr. Maurice St. Pierre, Ste. Anne de la Pocatiere, and Pellerin Lagloire, who acts as secretary of the board of judges.



## Nine Days' Work Tills and Seeds 2500 Acres

An outfit like the one shown in our photo wouldn't find much use on the average Quebec farm, but it is interesting to see such an outstanding example of mechanized farming on a mass production scale. Here eight Cockshutt "Tiller Combines" are being used together to seed 2500 acres of 60 day barley on a big farm at Chin, near Lethbridge, Alberta. Hitched behind a tractor moving three miles an hour, these tillers turn 88 furrows, seeding a strip 48 feet wide as the outfit moves down the field. The outfit seeds as it tills, and the whole 2500 acres were seeded in only nine days.

## Scholarships for Advanced Study in Agriculture

Two scholarships are offered in an announcement recently received from the Corporation des Agronomes. One is for advanced study in soil conservation, the other for studies in the realm of field crops or animal nutrition.

The scholarship for the study of soil conservation is tenable at the University of Wisconsin, during a period of one year. The scholarship provides \$150 per month for the first eight months, with a further provision for the payment of \$100 per month for four more months, if this extra time is necessary for the holder to obtain a Master's degree.

Candidates will be selected by competitive examination in the subjects of geology, bacteriology, drainage, fertilizers, soil management, crop production and plant physiology.

Funds for the scholarship for studies in field husbandry or animal nutrition have been supplied by Canada Packers Ltd. This scholarship is open only to French speaking members of the Corporation des Agronomes and is tenable at the Ontario Agricultural College. It is offered with two ends in view: to make it possible for some clever student to take advanced work, and to give some Quebec student the chance to study in another province. The winning candidate will be selected on the basis of examinations set by the scholarships committee of the Corporation.

## Efficiency of Pest Control Measures to be Studied

Throughout the Province of Quebec there is a sum of some twenty million dollars invested in orchards; an investment which must be protected. Yet, in any one year, apple growers lose anywhere from 15% to 30% of the potential value of their crop through damage by apple scab, fire blight, codling moth and other pests and diseases.

Much time, labour and money is spent in spray programmes every year by our growers in an effort to control these pests, and notable success has been obtained. Just the same, the Minister of Agriculture is convinced that even better control is possible, and has named a special committee to study this question, in an effort to discover more effective methods of protecting the apple crop.

The members of this special committee, who will work under the direction of Deputy Minister Jules Simard, are Dr. George Gauthier, Provincial Entomologist, O. Caron, Provincial Botanist and Dr. J. Tardif, chemist in the Department of Agriculture. They will study the control methods now practised and, if necessary, will conduct experiments to discover some more efficient and less costly methods.



## Haying Without Pitchforks

The old reliable hay fork appears doomed to take its place among the relics of a past era. Keeping in step with the technological revolution which has taken place in other phases of farming, haying has now been streamlined by the introduction of completely mechanized outfits which reduce cutting, hauling and storing to a minimum of human labor.

During a recent tour of the state of Vermont to study the latest in pasture improvement work, technical representatives of the agricultural chemicals division of Canadian Industries Limited had the opportunity of seeing modern hay making machinery in action. They saw the cutting operation performed by a "self-powered" harvester pulled by a tractor.

This machine mows the hay and cuts it into one to two-inch lengths by means of sharp blades on a revolving drum. Mounted on the rear, a conventional-type blower elevates the cut hay to a special wagon which is pulled alongside. The wagon boxes are equipped with movable canvas aprons for ease in unloading.

From the wagons the chopped hay is fed steadily into a blower that elevates the feed to a hay mow or silo. This blower is similar to an ordinary silo filler but has no knives.

When the hay crop is harvested green it is stored in a silo for hay silage with oat chop added as a preservative at the rate of approximately one and one-half bags per ton. If dry feed is desired, the crop is cut with a mower and cured in the field. In this case a pick-up attachment is employed in front of the harvester.

The same equipment may be used to harvest corn.

## New Type of Rust Threatens Oats

In their continuous war on pests, Canadian plant growers and botanists are now faced with a new enemy. Reports from the United States reveal that during last summer there were moderate to severe infestations of a blight and root-rot disease of oats throughout the southern and central states.

Known to botanists as *Helminthosporium victoriae*, this fungus disease can be detected by yellow-green or orange-blue streaks running lengthwise along the leaves. Injury has been found so severe that many seedlings never emerged from the ground.

While not serious in Canada at the moment, there is every possibility of it spreading north to become a real menace. Of major importance is the fact that several varieties of oats, developed through tedious breeding programs for resistance to smut and rust infection, have fallen prey to this disease. Should the blight reach

significant proportions in this country, plant breeders will be faced with the task of developing new resistant varieties.

Among the seed treatment tested in Missouri, where one of the first outbreaks of the blight occurred, investigators found that Ceresan, an organic mercury dust, applied at the rate of one-half ounce per bushel of oats, gave satisfactory control of fungus spores in the seed. However, they also found that the crop could be infected from the soil.

## Separator May Be Robber

Whenever skimmilk shows more than .02 percent butterfat, farmers are losing money through wasted cream.

Fat loss in excess of .02 percent is avoidable. Where losses are greater the cream separator and the operation should be checked.

The most common causes of excessive fat in the skimmilk are:

Using a separator that is not absolutely clean.

Not flushing out the bowl with hot water before turning in the milk.

Disks or other parts within the bowl that are bent, have rough surfaces or are badly worn. Rudnick says the bowl should always be sent to the factory for rebalancing when in need of new parts or other repairs.

Leaky float or no float.

Bent spindle, loose neck bearing, or any other factor that will cause the bowl to wobble.

Separator not sitting level; height of bowl not properly adjusted.

Speed of bowl too low. Using an electric motor does not guarantee the proper speed.

Abnormal milk such as high acid or mastitis.

Leaving more than .02 percent fat in the skimmilk, even though it appears insignificant on a day-to-day basis, adds up to quite a sizable amount over a year's time.

## Quebec Hatcheries Had A Good Year

By the end of June, co-operative and private hatcheries in Quebec had shipped 9,460,173 chicks, well above the 1946 production of 8,618,958.

Average hatching percentage was slightly higher than last year, 68.75 as against 67.83. The upward trend in evidence since 1941 is continuing.

Some hatcheries are specializing in the production of turkey chicks, and a new high is foreseen in the production of Quebec-raised turkeys this year.



## Strippings

by Gordon W. Geddes

Well, we couldn't buy a silage blower so there was no need of wondering whether or not it was a good investment. But we did finally find a neighbour willing to let his blower come for the job if we could find the power to run it. Possibly he was a little too far away to call a neighbour as it was over five miles but certainly he was a good neighbour no matter how far away he was or he would not have done such a good turn. In fact he would not have been in a position to do so if he hadn't lost both his silos in a fire. Having got that far the next thing was to find another good neighbour to furnish the power.

My next door neighbour, who tried it last year, also wanted to fill his silo with clover again so that made two jobs. This looked too big for any of the men with tractors who had their own haying to do but finally one agreed to come for two days and another to finish the job when it could be worked in to interfere with haying as little as possible. The weather was so bad that most of the time we couldn't make hay anyway though it has been better lately. And then there was the question of enough help to keep a tractor busy. However a man who has helped me with his team for several years at silo-filling would come again and had a boy big enough to drive the teams on the hay-loader so we seemed to be all set. I had been planning on two teams of my own. However one of my horses is soon to become a mother and it proved to be too hot and heavy work for her. But the man with a team had another horse so he brought that down to go with mine and the work went on. So my silo-filling is over and we hope to finish the other one to-morrow. It was certainly a good example of how the farmers have to co-operate in every possible way to get their work done.

# IT'S NOT HARD TO TAKE!



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Certainly we don't get much co-operation from the weather. After the wet spring we get a wet summer though hay has done well lately in many places. Our neighbour certainly could never have made hay of his clover. It was extremely heavy and should have been cut earlier if possible as it lodged and is very hard to mow. However it is certainly a wonderful crop. It was planted with fertilizer last spring and no manure. In the fall it was top-dressed with manure. He had good grain and the best

clover he ever had. His usual practice has been to manure the grain which made it lodge so that he lost a lot of it and the new seeding was killed out. We used to do the same thing but gave it up some time ago for the same reasons.

At least the abundance of moisture has made pasture hold up better. This is fortunate as the feed obtainable now does not appeal to cows enough so they want it on pasture. But, in spite of good pasture conditions the butter-maker was telling me the other



day that he could tell which farmers had fertilized pastures by watching their cream tests and weights. Both went down where fertilizer was not used. My belief is that the cream screw must have been changed where the test went down in an effort to keep the cream weight up. Our experience has been that the cream test went up as the milk flow dropped. Anyway fertilizer on the pasture seems to get results.

Some of our fertilized pasture was so wet that we couldn't get the cows on it soon enough. Part of it has headed out and should be mowed but we can't seem to find time for it. However it is amazing how much the cattle have fed on that small corner and still let some of it head out. We sowed another piece to oats and intended to let the cattle run on it but it was so wet we fenced it off and sowed so late that they haven't been on it yet. However it is coming along well now and should soon be ready. It will come in handy when the pasture sags off just before the aftermath in the hay-fields is ready to use. We tried some reed canary grass and ladino clover to seed it down and will see how it works out. Once again we are hoping to get some fall rye in for fall pasture to fill in another low period just before the cattle come to the stable. Perhaps this year we will get it done as the things we hope for gradually come to pass so there may be some good in hoping (but more in getting busy and doing).

Once again we missed the Farm Forum meeting but it was quite a success without us though it would certainly have been worthwhile if we could have made it.

### Keeping Up Value of Eggs

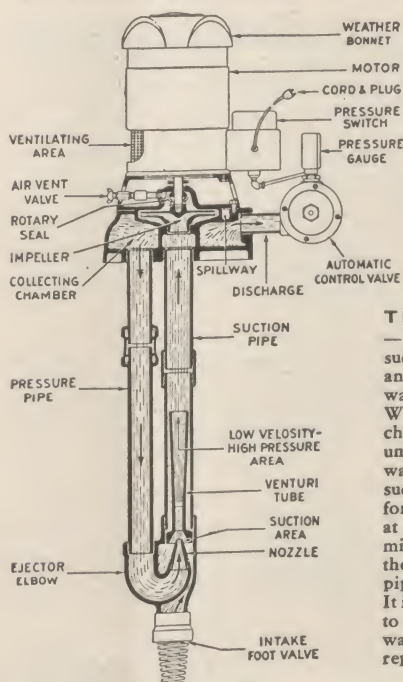
Right after the breeding season male birds should be separated from the laying flock, as the warm summer temperatures will cause the germ of a fertile egg to develop. Warmth has the additional effect of reducing the cooking qualities of the eggs, and the eggs should be held at a cool temperature, preferably about 60-65 degrees F. in farm cellars, well ventilated and free from strong odours.



## FAIRBANKS-MORSE EJECTOR TYPE WATER SYSTEM

*Can be installed off the well... Has no moving parts below ground*

You're through forever with pumping and carrying water when you install a Fairbanks-Morse Ejector Type Water System. These compact, easy-to-install water systems give you all the water you need at the turn of a tap. As there are no moving parts below ground, they can be installed away from the well.



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### THE EJECTOR PRINCIPLE

— The F-M Ejector Pump operates on the suction principle. It is equipped with an ejector assembly located below the water level of the well for maximum lift. Water passes through the pump collecting chamber to the ejector, creating a vacuum around the ejector nozzle. This enables water from the well to flow into the suction chamber of the ejector. Water forced through the ejector nozzle flows at a high speed into the venturi, where it mixes with water from the well, causing the water to be jetted through the suction pipe to within suction range of the pump. It is forced into the discharge pipe leading to the storage tank and a portion of the water remains in the collecting chamber repeating the cycle.

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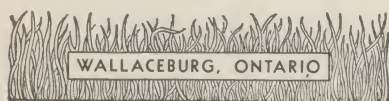
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CEROGRAS**

**FOR LIVESTOCK AND  
POULTRY FEEDS**



## Wheat Harvests Around the World

There is not a month in the year in which a wheat harvest does not take place in some part of the world. Below are the dates of the wheat harvest in various countries:

January:

Australia, New Zealand, Argentine, Chile.

February:

India.

March:

India, Upper Egypt.

April:

Mexico, Cuba, Lower Egypt, Syria, Persia, Asia Minor.

May:

Morocco, Algeria, Tunis, northern parts of Asia Minor, China, Japan, Texas, Florida.

June:

The Mediterranean peninsulas and south of France, California, Oregon, Utah, and the greater part of central and eastern United States territory south of 40 degrees, Afghanistan, Japan.

July:

France, Austria-Hungary, Southern Russia, the northern parts of the United States.

August:

Canada, England, Belgium, Netherlands, Germany.

September:

Scotland, Sweden, Norway, Russia.

October:

Finland, Northern Russia.

November:

Peru, South Africa.

December:

Burma, South Australia.

## Atomic Science Aids Agriculture

Experiments using radioactive substances to trace the course of materials through plants and animal bodies recently were conducted for the first time in South America at the University of Saskatchewan by Dr. J. W. T. Spinks, professor of physical chemistry.

One important use of the "tracer" technique embraced the study of phosphorus intake from fertilizer by wheat — Saskatchewan's major crop. Radioactive phosphorus was obtained from the Chalk River energy plant and the Geiger counter in the university's chemistry laboratory was used to indicate the results.

The tests revealed that in its early growth, wheat obtained nearly all its

phosphorus from fertilizer and practically none from the soil. After approximately five weeks the plants drew about equal amounts of phosphorus from both sources. As the wheat approached the ripening stage, it extracted more phosphorus from the soil than from the fertilizer.

Judging from initial experiments, Dr. Spinks predicts the "tracer" technique will prove of great value to agriculturists in determining best methods of applying fertilizer and choosing the type of fertilizer best suited to different kinds of soil.

During the war, Dr. Spinks worked on atomic energy research in the Montreal laboratory of the National Research Council.

## "REX OIL" Gets Breeding Results

George Patterson,  
Salmon Arm, B.C. says:

"Rex Oil has saved a number of my cows from going to the butcher. For more than a year I tried to get the cows in calf. I used three different bulls. Rex Oil did the trick. After giving them Rex Oil they settled."

**READ  
WHAT  
USERS  
SAY**

Mercedes Gibson,  
Carlington, Ont. says:

"You will be interested to know that my mare, after losing two foals, was treated with Rex Oil. On her next servicing she promptly settled, carried her full time, had a very easy foaling and now has a beautiful colt that is the admiration of all who see it."



If your livestock is suffering from breeding troubles you cannot afford to overlook Rex Oil. It has been proven over and over again that Rex Oil corrects and prevents non-organic breeding troubles in cattle, hogs, sheep, horses, dogs and all fur bearing animals. Rex Oil supplies essential reproductive factors in a concentrated form WHICH DOES NOT DETERIORATE. Rex Oil is not expensive... a few drops daily in the feed does the trick. Prove to yourself how Rex Oil can help every animal on your farm.

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For ALL livestock and poultry**



## CO-OPERATIVES MAKE FOR PEACE

If we people of the world are to have peace we must adopt the ways of peace. If men are really to live as brothers it must be possible for men to live that way. Our potential capacity to produce is now such that mankind for the first time has the opportunity to establish a satisfactory standard of living for all.

In the days of continuing scarcity, strife and competition were inevitable. But today what an opportunity is ours. If we can only find the way—the way to apply effectively mankind's unfailing principles of fair dealing and unselfishness to the problem of production and distribution. International war is but an extension of the strife which exists between man and man, between industry and industry, between corporation and corporation.

In the past several dogs fought for one bone. More recently there have been places and times when there were too many bones for some dogs and none for others. Today there is the possibility of a bone for every dog. We must find a way to base the major productive enterprises on need rather than on the desire for gain.

Co-operation is the way. Through co-operative enterprise each of us can improve his own position and that of his associates *at the same time*. Co-operatives were begun as a self-help project by exploited small groups of people. It has now been demonstrated beyond any possibility of doubt that huge undertakings can be operated directly by the people who need them, rather than by those who seek returns on investment. Co-operatives change the emphasis from getting something that may not be earned to producing something because it is needed. To the extent that co-operatives are successful major causes of suspicion and war have disappeared.

# INTERNATIONAL PLOWING MATCH

Imperial Oil Limited Announces the  
**SECOND ANNUAL**

## ESSO CHAMPION TRACTOR CLASS

AT THE

## INTERNATIONAL PLOWING MATCH

Hemlock Park Farms, Kingston, Ontario

October 14th to 17th (inclusive)

## TRIPS TO BRITAIN!

**GRAND PRIZE** for both gold and silver medal winners in this class will be a trip to Britain including an agricultural tour of the British Isles.

**FOR FULL INFORMATION** regarding the Esso Champion Tractor Class and local awards at branch matches, Ontario residents should enquire at their local branch of the Ontario Plowmen's Association. Those living in other provinces should contact their local Imperial Oil representative.



# IMPERIAL OIL LIMITED

Farm Division





## THE WOMEN'S INSTITUTES SECTION

*Devoted to the activities of the Quebec Institutes  
and to matters of interest to them*

### "Onward We Go"

"We Treasure the Past, We Face the Future". This slogan of the Women's Institute for "anniversary year" was the thought running like a thread through the entire convention of the Quebec Women's Institutes. With the largest registration ever recorded, ideal weather and the gracious hospitality of Macdonald College, the 33rd. annual convention of the Q.W.I. showed that organization is "facing the future" with a very real enthusiasm. Welcoming the delegates, Dr. Brittain, vice-principal and Dean of Macdonald College, stressed that thought in a challenging address. The success achieved by the Institute was due to the fact it met a very real need but that should not make us complacent, he stated. Rather it should be an incentive to still greater achievements. An inspiring message given by the president, Mrs. Smallman, further emphasized the theme. "We must accept the challenge and press ever onward", she declared, concluding with a quotation from Victor Hugo, "If God had intended man to go backward, he would have given him an eye in the back of his head." Keen regret was expressed at the absence of Mde. P. C. LeBeau owing to illness. She sent her greetings and best wishes for the success of the convention. Greetings were also extended by Mrs. Laird on behalf of the Macdonald Women's Union and by

Mrs. Rollo, a member of the Scottish Women's Institute, now visiting in this country.

**WHAT WE HAVE BEEN DOING.** This forward move was again noted in the report submitted by the demonstrator-secretary, Miss Evelyn Walker. "We now have 2550 members", said Miss Walker, "an increase of 400 since the last convention." 4 new branches have been organized making a total of 96 senior and 2 junior with several prospects in view for organizing more of both groups. Reports of the convenors also exemplified this expansion of service. School lunches were receiving greater support, stated Mrs. Daintrey's report on Education, and the growing number of Home and School Associations shows a realization of the need for closer co-operation between teacher and parent. An increasing tendency to award scholarships was another project receiving favourable comment. Increased interest in school age children and better co-operation with health authorities were features of the report on Welfare & Health given by the convenor Mrs. LeBaron. Over 1/5 of our members are now enrolled in the Blue Cross Plan, she stated. The need for more demonstrations was stressed and Mrs. LeBaron asked that more attention be given Youth Hostelling, Girls Camps and V.O.N. extension work into rural areas. More demonstrations were noted by Mrs. Hurley, reporting on Home Economics. Mention was made of the two week's course on weaving given by Miss Walker at Scotstown. Handicraft exhibits at county fairs are also receiving more attention. Mrs. Mortimer prefaced her report on National and International Relations by quoting from a letter recently received from England in which she was asked to convey to the Q.W.I. the deep gratitude and affectionate regards of the British Institutes for the many acts of kindness shown to the people of that country. She urged use be made of their gift of books to us and asked that a study be made of the new Citizenship Act. Mrs. Mortimer felt great care should be taken in the selection of convenor for this important department. Women, well-read and of broad understanding, were needed to give the proper leadership. Mrs. Ellard's report on War Services is given in its entirety elsewhere in this issue. Mrs. McGibbon reporting on Junior work stated more interest is being shown and plans are being



This started out to be a picture of the Q.W.I. executive, Mrs. Thompson contrives to hide while she and Miss Walker argue it out. (Mr. Walsh in the background).



made for suitable programmes. Inverness Juniors sent a delegate and a representative was present from Valcartier, where another branch is being organized. Another report always heard with keen interest is that of the treasurer, Mrs. Harvey. Cash on hand and in the bank showed the satisfactory total of \$2,049.54. The Q.W.I. Service Fund had been well supported with \$660.67 in that account. The A.C.W.W. Members Plan also showed the largest amount yet sent, \$47.02.

**WHAT WE HEARD.** Keynote addresses were given by authorities on the various phases of Institute work. "How Good are our Schools?" was the pertinent question asked by Mr. David Munroe, Principal Ormstown High School, who went on to answer his own question by saying they were good but not good enough. Several rules were given for measuring their excellence. (1) size and range of enrollment (2) efficiency of the staff (3) satisfactory health programme (4) community relations (5) curriculum. The school needs the support of every organization, the speaker stated, and felt the Q.W.I. could take the lead in this. Miss Elinor G. Barnstead, Supt. of Case Work, Family Welfare Assn., Montreal, addressed the delegates on "Social Services in the Prov. of Quebec." Public Welfare Agencies supported by taxes are necessary, she declared, and added they should help people to help themselves. Miss Barnstead urged the Q.W.I. do all possible to persuade the provincial government to introduce child welfare legislation and concluded by saying "When man comes first on the world's agenda we shall come nearer to reaching out horizons. In an intensely interesting story, Mr. C. W. Petch, Hemmingford, took his listeners back 30,000 years to the beginning of agriculture on this continent. The influence and contribution made by every race coming to these shores was clearly traced bringing us up to farming as we know it today. Dr. Hanson, McGill Conser. of Music, made a plea for more music in the rural schools and communities. The appointment of a supervisor of music for the schools was suggested and the furnishing of adequate material such as phonographs, records and music books. Choral societies were also stressed as one method of bringing music to the community. Two addresses of special interest to Junior Institutes were heard Wednesday evening, "Girl's Night". Miss Anne Vaile, Iverley Community Centre, Montreal, spoke on "Camping for Girls" and Dr. E. C. Webster, McGill, was heard on the topic, "Charting a Career". Both talks contained much practical advice and were listened to with keen interest. The speaker at the concluding session, Mrs. Franco Consiglio, Montreal, presented her subject, "Leadership and what it is" in a witty and humorous manner. Leadership, she defined as "the aim to enrich other lives through following you" The speaker stressed the importance of being able to delegate responsibility successfully and mentioned other

other attributes, confidence, enthusiasm, energy, courage and common sense.

**WHAT WE SAW.** Through the kindness of Miss Laura Pepper, Dept. of Agriculture, Ottawa, two demonstrations were given on the closing day of the convention. A Cook's Tour of the Garden" by Mrs. MacKinnon (perhaps better known as Miss Bachelder) gave many appetizing ways of serving summer vegetables. Miss Gerlach showed clearly the procedure for quick freezing of fruits and vegetables. Handicraft work done by the members of the Q.W.I. was attractively displayed in Room 111 in the Main Building and attracted much favourable comment. The exhibit prepared by the Q.W.I. for the F.W.I.C. display at Halifax also excited much interest. The usual displays prepared by the various convenors were of value.

**WHAT WE DID FOR FUN.** The big event was, as usual, the tea at Glenaladale to which all guests and delegates were invited. A huge birthday cake, decorated in gold with 50 blue candles was a feature of the tea table. The highlight of this social period was the presentation to Mrs. Smallman of a beautiful maple leaf pin in marcosite silver of exquisite design. Mrs. Dow in making this presentation, referred feelingly to the splendid service given by Mrs. Smallman to the Q.W.I. and the warm place she had won in the hearts of all those privileged to know her. A cheque for \$636, the money raised by the branches to apply on expenses of the trip to the A.C.W.W. convention, was also presented, this time by Mrs. Harvey, who voiced the feelings of the members in an original poem. Mrs. Smallman expressed her thanks in her usual gracious manner and assured the delegates the maple leaf would be worn with pride when she represented the Q.W.I. at Amsterdam. A pleasant hour was also spent by the members of the Board when they were entertained by Mrs. Brittain at her home at the conclusion of their session on Tuesday. The always anticipated treat, organ selections by Dr. Hanson, was enjoyed at the evening sessions. Vocal solos beautifully rendered by Mrs. Richards, Orford, and community singing led by Mrs. Syberg, Fordyce, were other pleasing features. Mrs. Syberg also charmed her audience with songs in her native tongue, Danish. Through the kindness of Prof. Avison films were shown on "junior's night" and a pageant portraying the inception of the W.I. and its growth. This was arranged and the script written by Mrs. Gerald Miller, Pres. Gaspe Co. W.I.

**AND SO — HOME WE GO** with a pad full of notes, a head full of new ideas and so full of enthusiasm altogether that no task is too difficult, no obstacle insurmountable, as we move forward past the 50th milestone on to an ever expanding field of service for "Home and Country."



## The Month With the W.I.

(Held Over From the July Issue)

**Gaspe:** This county concluded their meeting with a concert in the evening in commemoration of the W.I. Golden Jubilee; each branch making a contribution. An enjoyable number was a humorous recitation by Mrs. Dow. L'Anse aux Cousins sold seeds donated by the members to aid general funds. A Gaspé wild flower formed the rollcall. Sandy Beach is filling 5 ditty bags. A sale of home cooking and hints on removing stains are reported. Wakeham heard a paper on "The School Lunch Box" and held a contest on plain and sweet rolls. The Blue Cross was discussed. Some books were added to their library and a dance held to raise funds to assist that splendid project. A short history of the branch was given.

**Gatineau:** Aylmer East had an address on Home Canning by Miss Elliott of the Dept. of Agriculture and short talks by some of the convenors. This branch served the dinner at the county convention. Kazabazua held a most successful "Remake Revue". A cookie contest was a feature of their meeting. Rupert gave a "welcome" shower to the recently arrived English wife of a serviceman. The annual memorial service at the cemetery was arranged and a dance and card party assisted the treasury. Wakefield had an original programme when members gave impromptu talks on topics "drawn from a hat", with a quiz on agriculture completing the session. \$40 was realized from social activities. Wright members handed in suggestions for improving local fairs and an article on "The Farmer vs the Factory Worker" was discussed. Members are sending magazines to the St. Lawrence Sanatorium at Hull.

**Megantic:** Inverness presented bill folds to their returned men. A paper on Weed Extermination was read and a news item in which Prime Minister Mackenzie King expressed his thanks to the Q.W.I. for their co-operation with the W.P.T.B.

**Missisquoi:** Fordyce welcomed two more members. They are planning to compile a cook book of tested recipes. St. Armand held a flower contest and exchanged garden slips. A thoughtful article entitled "My Neighbour" was read.

**Montcalm:** Rawdon is doing valuable work in public health. This branch has a large Blue Cross group and also had charge of the Red Cross Campaign. Their last meeting was open to the public and moving pictures were shown and a lunch served.

**Pontiac:** Exhibits for the fair were discussed at the meeting of this county. Arrangements are being made to operate the tea room again at that time. Beech Grove exchanged plant slips and a surprise box netted \$1.15. Bristol Busy Bees have joined the Blue Cross. An ad-



Mrs. C. E. Conley, Mrs. Smallman, president-elect and past president of Q.W.I.

dress on gardening was given by the agronome, Mr. Neil Drummond, and planting borders was discussed. Books on sugar saving recipes were distributed. Clarendon received an appreciative letter from a Scottish mother to whom a layette had been sent. A quilt was also given a fire sufferer. Two minutes silence was observed in memory of a past honorary president, Mrs. Wesley Hodgins. A contest, peeling potatoes while blindfolded provided a little "fun". Elmside reports a worthwhile activity, caring for the border on the school grounds, and they are planting more bulbs and shrubs. The various convenors gave short talks on suitable topics. Fort Coulonge had a sale of plants and bulbs and petunias are to be planted on all available land. Home Economics was the subject of the programme. Shawville chose Welfare and Health for their programme with rollcall, "A remedy which should be in every medicine cabinet", and films on Cancer and First Aid. A tea and Telephone Bridge proved profitable. Stark's Corners also exchanged slips and bulbs, and shrubs sent from the Experimental Farm, Ottawa, were distributed. A young mother and baby were remembered with a gift. Quyon entertained the agronome, Mr. Drummond, who gave a talk on "Insect Control" and distributed pamphlets. Wyman entertained the county convention. A woollen quilt was donated a fire sufferer and Mrs. Smallman's letter was discussed.

**Papineau:** Lochaber reports a most successful county meeting with Mrs. G. D. Harvey, representing the Q.W.I. executive, and Mrs. Hopkins as guest speakers. The former gave a most instructive address on various items of Institute work. The convenor of Agriculture is working on plans for a school fair this fall, a grant for \$25 having been received from the Town Council



for this purpose. The retiring co. pres. Mrs. F. McEachern, awarded two prizes for the best reports, Mrs. Harvey and Mrs. Hopkins acting as judges. The first was won by the Publicity Convenor, the second by War Services.

**Quebec:** Valcartier entertained Miss Walker, who gave a talk on Budgeting and making a dollar go farther. She also acted as judge in a cooking contest, with prizes for the winners. This institute is giving a concert and a quilt was made to be sold at that time. Two new members enrolled and plans made for the annual picnic.

**Rouville:** Abbotsford had the pleasure of a visit from a Scottish Institute member who brought greetings from her branch at Muckhart, Scotland. She also outlined how their meetings were conducted. Two Badge of service pins were presented faithful Red Cross workers, by the president.

**Richmond:** (See note on their county meeting elsewhere in this issue) Cleveland is changing their monthly meetings to an earlier date in order reports may be sent in time to their county convenor of Publicity. (Perhaps other branches might like to make a similar change) Articles are being made for a sale later in the season and a series of card parties is being planned. Melbourne Ridge had a sale of slips and other articles and a salad tea was held to raise money. A gift was given to a Scottish bride. Spooner Pond arranged a shower for a bride and another for a bride-to-be. A presentation was

also made to their retiring president. An amusing contest, "Jumbled Pies", and a practical one on date bread were reported. The programme consisted of an article by the convenor of Agriculture.

**Shefford:** Granby Hill had a sale of slips and seeds and \$1.75 was received from raffling a donated article. A birthday box was packed for a friend. South Roxton had an agricultural programme when a paper was read entitled "Cash vs Credit Buying for the Farmer" and a lively discussion on "Have Farm Forums helped Agriculture?" Warden chose a similar topic when they discussed should the farmer or his wife look after the garden and heard a paper on how to make and operate a cold frame. A travelling basket is being circulated and a birthday basket packed for an aged invalid.

**Sherbrooke:** Ascot had as guest speaker, Mrs. G. E. LeBaron, Prov. Convenor of Welfare and Health. Two members are attending a short course in handicrafts. A rummage sale and sugar social proved profitable. Brompton Road is planning an ambitious project furnishing a room in the new Sherbrooke Hospital in addition to aiding the county in a similar undertaking. Members made entries in the Handicraft Exhibit held in Sherbrooke. \$5 was voted the Cancer Fund and maple sugar is being sent veterans in the local hospitals. Belvidere presented a life membership to their retiring president, Miss Drummond. A raffle of aprons and a quilt realized a satisfactory profit. Cherry River had a sale of home made soap and enjoyed a hilarious contest on trimming hats. An article on soaring prices was read. Lennoxville members entered handwork in the Handicraft Exhibition in Sherbrooke and three members took the short course in that work. Maple sugar is being sent to veterans in local hospitals. Slides were shown on beautifying the home surroundings. Milby is another branch sending maple sugar to disabled veterans and their members are taking part in the Handicraft Exhibition. Orford is also remembering the veterans with maple sugar. An apron parade and sale netted \$4.75. "Youth and the High School", a prize-winning essay, was read by Miss Sjolander.

**Stanstead:** Mrs. Smallman was welcomed at the annual meeting, her first visit to this county. A county exhibit is being prepared for the local fair. Ayer's Cliff has formed a Blue Cross group. Rev. Mr. Brett was the guest speaker. Beebe voted \$50 for two European orphans and \$15 to the Greek Relief. A card party, food sale and waste paper collection were used as "money-raisers". This branch sponsors an active Girl Guides group. Hatley held a rummage sale and gave gifts to two brides. A talk on "Wild Flowers" was given by Mrs. Pellerin. Minton made plans for the county exhibit at fair. North Hatley has shipped the exhibit prepared by this branch for the A.C.W.W. conference in Amsterdam. This consists of a salad service



THE W. I. BOOTH AT THE SHERBROOKE HANDICRAFT EXHIBITION. Branches of the four counties of that district entered samples of their work and demonstrations were held every day by the members on weaving, rug-making, chair seating, basketry and leather work. In the picture will be noted many beautiful woven spreads. Smaller articles of weaving were also shown, rugs, murals, stuffed toys, shell and clay jewellery. Mrs. M. G. Richards and Mrs. G. Crawford were the two members in charge of the booth when this picture was taken. Mrs. H. L. Wallace, Publicity Convenor for Sherbrooke Co., was chairman of the committee that arranged for this booth and includes this comment when sending the picture. "Many members had their first chance to display and sell their crafts publicly . . . and a new interest has been stimulated in this work."



of native wood and a luncheon set woven of Quebec flax and asbestos thread, the weaving being done by one of the members. Way's Mills enjoyed letters of appreciation from Cross-in-Hand W.I. in England, where their food parcels are sent. Flowering plants were distributed and gifts given to a new baby.

**Vaudreuil:** Cavagnal. As a result of organizing a class in Handicraft this past season, much interest has been created in this activity. An exhibit of articles made by this group has been staged, a small loom bought and a large one ordered to be delivered this fall in time to give demonstrations. A rummage and home-cooking sale realized \$83.35 and \$10 was voted the Q.W.I. Service Fund. This branch has been steadily growing and now reports 56 new members on the roll.

## Our War Record — 1940-47

by Dorothy Ellard

This report is not at all complete as many branches did not send in complete returns. As one member said, they were so busy working to win the war, they had no time to fill in reports. I think on reading this, one can understand her point of view, although it is a pity not to have all their efforts recorded.

Sewing for Red Cross and others.... (55 layettes)	44,803
Knitting for Red Cross and others.....	39,344
Blankets and Afghans .....	267
Quilts .....	1,071
Pillows .....	160
Soldiers' boxes sent overseas—2,842 worth.....	\$844.65
(not complete)	
Money to Red Cross .....	\$7,393.11
Self Denial Fund .....	2,470.44
Ditty Bags filled .....	1,734 at a cost of \$8,670
Funds collected for various War Funds.....	\$11,646.27
Russian, Greek, Polish Funds .....	\$497.75
Bundles for Britain .....	2,238
Allied Post .....	\$80.00
Prisoner of War Fund .....	\$1,357.53
War Bonds .....	\$4,207.85
War Certificates .....	\$304.70
Queen's Canadian Fund .....	\$323.63
Seeds sent overseas .....	\$221.25
(Hundreds of pounds sent also)	
Cigarettes sent overseas..... (not complete)	\$215.98
Save the Children Fund .....	\$909.36
Legion .....	\$207.55
Cash to Military Hospitals.....	\$132.97
Entertaining returned men .....	\$575.00
Gifts to War Brides .....	\$290.00
Jam, Honey, Maple Sugar sent overseas—3,880 tins	\$119.35
Hong Kong Relief Fund .....	\$300.00
Two electric heating units Valcartier Military Hospital cost .....	\$1000.00
Navy League (also maple sugar) .....	\$54.00
Junior Red Cross .....	\$75.00
Chicken canned and donated to Legion..... tins	140
War Certificate to Minister of Finance.....	\$115.00
The F.W.I.C. sent a Mobile Canteen to England, share of Q.W.I.....	\$316.08
F.W.I.C. ambulance for overseas, Q.W.I. share not recorded .	

Total amount spent for war purposes.....\$30,884.84

Slab chocolate sent to R.A.F. Vests made and sent to Seamen. Leather and fur jackets also, some to Norwegian Navy. Knitting done for Norwegian children. Thousands of pounds of clothing sent to clothing drives. \$845.69 given to Red Cross for Hostel for War Brides



A few of the Board members with our Scottish visitor. Reading from left: Mrs. Ellard, Mrs. Rolol, Scotland, Mrs. Harvey and Mrs. Mortimer.

in Montreal. Poppies sold and money sent to Can. Legion every Remembrance Day. Honour Rolls presented by some branches to schools and churches. Some children adopted through Save The Children. Helped children in Junior Red Cross and taught them sewing and knitting. Spitfire Fund supported generously. Salvage collected of all kinds and sold, funds used for War Funds. Members collected and donated their meat coupons and sent them to W.P.T.B. to send meat overseas. Visited military hospitals and gave gifts. Books and magazines sent to Military Hospitals and still being done. Unitarian Relief Committee supported. Through the Women's Voluntary Services, Eng. names of 100 families were taken and each branch took one. (Some several) Parcels of food and clothing are sent monthly to England. This work will be continued as long as the need is there. Several counties adopted ships named after their counties and sent comforts to the men aboard these ships until the end of the war. Blood Donor Clinics were sponsored by several branches and hundreds of members were blood donors. They also provided the refreshments needed. Members that were nurses helped at these clinics and several trained as technicians. One clinic alone had 2,000 blood donors. All branches presidents acted as Liaison Officers for W.P.T.B. and members assisted in giving out ration books when needed. Members that were nurses held Home Nursing classes for the Red Cross and St. John's Ambulance Society. Members, the majority of whom were farm women had to work much harder taking the place of loved ones overseas and it is due in no small measure to their efforts that farm production was increased. Gaspé women, members of the W.I., gave aid to survivors of torpedoed vessels, ran kitchens and first aid canteens.





## LIVING AND LEARNING



### C.F.A. and Radio

Hannam writes open letter to Canadian Association of Broadcasters.

Considerable concern for the future of the CBC was expressed by resolution passed at the annual meeting of the Quebec Council of Farm Forums.

The Canadian Federation of Agriculture has once more reaffirmed its policy of support of national radio as exemplified in the present set-up of the CBC under the Radio Act of Canada. In a letter addressed to Ralph Maybank, M.P., Chairman of the Radio Committee of the House of Commons, the Federation re-iterated the stand it took in 1944, when a joint brief was presented to the committee together with the Canadian Association for Adult Education. This brief upheld the principle of publicly owned and controlled radio on a national basis as exemplified in the present set-up in Canada, declaring this to be in the best interests of the citizens of the Dominion. It recognized the services performed by private radio stations in the field of local coverage. The Federation again this year strongly urged that no change be made in the existing structure of national radio.

The Canadian Association of Broadcasters charged that the Federation has been misinformed as to the purpose and content of the proposal made to the radio committee by the association for an independent board to regulate both the CBC and private stations.

In answer to this charge, Mr. Hannam said in an open letter:—

"I would like to say at the outset, in respect to proposals advanced by your association, that we are neither misinformed nor confused in our mind as you intimate in your letter. On the contrary, we understand thoroughly the case you are attempting to put forward, and more than that, we appreciate keenly, as apparently the general public does not as yet, that the essential feature of your proposal, if acted upon, would more completely under-mine the whole principle of national publicly-owned and publicly-regulated radio than any proposal previously put forward. If there is any misinformation in the public mind, in our opinion, it is due largely to the activities of your own organization. Your letter to us and its public distribution, is a sample of what we have in mind."

The Federation letter denied the argument of the

Association that the CBC was in a position of a competitor to private stations. "To us", said the Federation letter, "this is a completely erroneous misconception of the set-up of the CBC".

The CBC, said the Federation, is not a competitor of private stations in the sense, for instance, as claimed by the Association, that one dairy is competitive of another. It was not the intention of parliament, when the present system was set up, that such should be the case. It was recognized that it would be impossible to have effective control of radio in the public interest unless the same body which is empowered to administer national radio also has associated with it the power to regulate all broadcasting.

The Federation letter concludes "It is our considered opinion that the people of Canada would be well advised to stand solidly behind the set-up of the present national system."

### Interviews for Broadcast

The CBC has just released information on some interviews to be broadcast by Jack McPherson, Farm Commentator for Ontario and Quebec, during September. Junior judging competitions at the Canadian National Exhibition will be covered on September 4. Other broadcasts slated are:

- Sept. 8 — Self-Feeders for Hogs — Prof. E. W. Crampton, Macdonald College.
- Sept. 11 — Our Clean Farm Contest — Junior Competitors.
- Sept. 12 — Central Packing of Apples — Charlie Waller, Franklin Centre, Que.
- Sept. 18 — A Junior Looks Ahead — Ralph Kirkpatrick, Bury, Que.
- Sept. 22 — Stepping Up Milk Production — Tom Majury, Lennoxville, Que.
- Sept. 24 — Fall Wheat in the Field — Garnet Rickard, Bowmanville, Ont.
- Sept. 25 — Junior Farmer Activity in Thunder Bay.
- Sept. 30 — Getting Clean Eggs — Irwin Watson Canterbury, Que.



## Veterinary Services

Because of a widespread interest on the part of the Quebec Forums, the Quebec Council of Farm Forum at a January meeting, passed resolutions respecting the need of increased veterinary services and the serious situation in Mastitis in dairy herds. These were forwarded to the annual meeting of the Canadian Federation of Agriculture, where they were accepted and forwarded to the Department of Agriculture at Ottawa. In reply, Dr. G. H. Barton, Dominion Deputy Minister of Agriculture, informs the C.F.A. that:

"With respect to veterinary services, it might be pointed out that Canada, like many other countries, is suffering from a lack of veterinary personnel. Many factors are involved, and it may be of interest to know that the problem is at present receiving intensive study by FAO since it has a bearing on the availability of foods and products of animal origin. We have recently established, however, two new National Committees under the National Advisory Committee on Agricultural Services; namely, a National Swine Committee and a National Dairy Cattle Committee, each of which has named one or more Sub-Committees to look into the problems of diseases as they affect these two classes of stock. Since both of these new National Committees hope to bring together Provincial and Federal workers, it is possible that the objective sought in this particular resolution may at least in part be achieved through such committees."

"With reference to the resolution on mastitis, I may say that our Division of Animal Pathology has had underway for a number of years a full scale programme of research on this disease. This project is being continued. Among the findings in this study was the therapeutic value of penicillin in streptococcic mastitis.

This information was given widespread publicity through the medium of the Publicity and Extension Division. We have hesitated to prepare a bulletin until a rather extensive field trial has been undertaken, because it is a well recognized fact that conditions arise in the field which cause a modification of plans and procedures which have been exceedingly efficient in the laboratory. We therefore deemed it wise to gather a considerable amount of practical data with regard to the subject before the bulletin was prepared. We believe that this has in large measure been accomplished and it is expected that a bulletin will be prepared in the not too distant future. It may be added that the National Dairy Cattle Committee mentioned above has named a Sub-Committee on mastitis and Bang's disease, headed by Dr. C. A. Mitchell, Dominion Animal Pathologist.

"Although the New National Committees mentioned above have only recently held their organizing meetings, we are hoping much from this bringing together of Dominion and Provincial workers in the livestock field."

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## Farm Forum Notes

*by Floyd Griesbach*

### C.F.A to meet at Brockville.

Farm Forum members will be interested to know that it has been definitely decided that the next annual convention of the Canadian Federation of Agriculture will take place at Brockville, in Eastern Ontario, starting January 26, 1948. It is expected that the Dairy Farmers of Canada will meet in the same place the latter part of the week before. Arrangements have been made for accommodation at the Minnetona Hotel, up to 35 double rooms, and there is another quite good hotel, the Revere, almost next door. The public sessions of the convention are being arranged for the public auditorium of the city hall, a few doors from the hotel. More details will be given later in the year.

### Health Insurance Next.

The Farm Forums who have spent considerable time discussing health services will be interested in the an-

nouncement by Honourable Paul Martin, minister of national health and welfare, that the next thing on the program now that old age pensions have been dealt with, is a national health insurance plan. The Canadian Federation of Agriculture's plan for national health insurance was presented in 1943, and the government on several occasions since has been asked to implement the plan. There is no indication as to how far the government will go in accepting the Federation's plan, but reference to this plan was made in the House during a debate on health estimates.

### Groff commends Quebec Forums.

Colin Groff, Secretary, Canadian Federation of Agriculture, made this comment in a recent national news letter:

"The largest annual convention ever held by the Quebec Forum groups took place June 21, with between 300 and 400 present. These groups are not merely radio



Forum groups, but rural study groups originally created through the Rural Adult Education Service of Macdonald College, but now carrying on independently as the English-speaking farm organization in Quebec. It constitutes one of the most forward-looking farm organizations in Canada, and is now represented on the Board of the Canadian Federation by a director. The Co-operative Federee de Quebec is one of the financial contributors to the organization, many members of which deal through the Federee. The relationship between the French-speaking and the English-speaking farm organizations is on a high level and is one of the encouraging things about the farm movement. Incidentally it may be accepted as another proof of the unifying influence of the Federation."

### C.F.A on Freight Rates.

Our Canadian Federation of Agriculture officials have been occupied preparing a presentation on behalf of Canadian farmers in opposition to the proposed 30% increase in freight rates. President H. H. Hannam, spent most of two days on the witness stand very ably backing their 6000 word brief.

Mr. Hannam stated that the proposed increase would mean an additional freight bill of \$20,000,000 per year to transport Canada's farm products to market. This would be a serious detriment to agriculture. The brief also stated that because of these increases, farmers would have to pay another \$1,000,000 yearly on implements, and substantial additional charges on fertilizers and feeds.

"The products of agriculture" said the brief, "because of our vast resources and advanced agricultural techniques, are distributed to widely scattered markets, both at home and abroad. Agriculture, therefore provides a comparatively high volume of freight traffic per individual producer. Accordingly, the level of the purchasing power of those engaged in agriculture is of vital importance to the national well-being."

Concluding the presentation to the board Mr. Hannam said: "We believe that the application for increased freight rates is ill-timed in view of the uncertainty of the future it would be a mistake for the people of Canada to support such a move now."

### Forum Leader on School Board.

Douglas G. Bradford, Argenteuil representative on the Quebec Council of Farm Forums, led the polls in a recent election when two vacancies were filled in the Lachute School Board. Mr. Bradford received 248 votes out of a total of 315 ballots cast. Other members of the board are J. W. McGibbon (Chairman), G. F. Calder, S. J. McFaul, and R. Muir.

## Adult Camp Plans Develop

The attendance at Camp Laquemac, School of Community Programs, promises to be up to high standards of former years. While participants will be drawn from distant parts such as Georgia, Scotland, Manitoba, Tennessee, and Nova Scotia, the bulk of those attending will be from Quebec and Ontario.

Among those who have registered at the end of July from Quebec are three from Lennoxville — Dr. A. N. Langford, Bishops University; Byron Labonte, teacher; and Allan Sutherland, University student. Three also will represent Sawyerville — Mr. and Mrs. Kenneth Fraser, and Miss Frances Evans. Those of the Adult Education staff, Macdonald College, who will be there are Mr. & Mrs. Floyd Griesbach, Margaret Dearden, Margaret Taylor, Renee Morin, Mr. & Mrs. Alex Sim, and Mrs. D. Fuller, Professor H. R. C. Avison, Jack Sword of the Manitoba Royal Commission on Adult Education will be one of several from Manitoba. The Adult Education Division of the Nova Scotia Department of Agriculture is sending two staff members.

Among the leaders will be: Dr. W. C. Hallenbeck of Columbia University, who has been on the camp staff for the past several years; Eugene Bussiere and Dean Levesque from Laval University; Mr. Alex Boudreau who has been active in organizing fishery co-operatives on the Gaspé coast, and Mr. James Tipton of the Bureau of Intercultural Relations, New York, as well as Lois and James Timmins of New York City. Dr. Lois Timmins is well known in Quebec for her leadership in recreation.

## NOTICE

### Diploma Course Students

Accommodation for students at Macdonald College is almost all taken up. Prospective students who wish to apply for the Diploma Course should apply immediately to the Registrar, Macdonald College, P.Q., but it is impossible to guarantee that applications received after this date can be accepted.

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## THE COLLEGE PAGE

### Departures and Arrivals

Prof. W. D. (Scotty) McFarlane, Head of the Chemistry Department since 1936, will not be with us next session. He has accepted the post of Director of Research for the new C.B.L. Institute in Toronto and will take up his new duties shortly. As this is written he is in England attending the centennial celebration of the British Chemical Society, an official delegate representing Canada.



The new Institute which Dr. McFarlane will direct will be housed in a building now under construction on the Toronto lakefront. It is a two-floor building with a basement, is 125 feet long and 63 feet wide, and should be opened officially in the spring of 1948. It is designed especially for the work that will be carried on in it, and Dr. McFarlane has been busy all winter on plans and specifications, to be sure that everything would be just right. As usual, building material shortages have made themselves felt, for it was hoped that the laboratories would be in full operation by this fall.

Much of the research work in the new Institute will be concerned with development work for Victory Mills, Ltd., which is a division of Canadian Breweries. In the broad aspect, it will aim at the development of new uses for Canadian farm products in industry and the expansion of existing uses. Through the work which Dr. McFarlane will direct, it is expected that new and wider markets for farm products, and particularly those products which now go largely to waste, will be developed. Dr. McFarlane has been deeply interested in this type of research for many years, and has published some forty papers in scientific journals on food chemistry and the

use of farm products. A member of many scientific societies, he is also vice-chairman of the National Chemurgic Committee, Canadian Chamber of Commerce, and during the war was a member of the sub-committee on agricultural policy of the Committee on Reconstruction of the Federal Government.

According to present plans, research will be carried on in six different divisions. (1) The development of new or improved equipment for research on brewing and malting, on the processing of oil seeds and their by-products, and the processing of food and feeds. (2) Fundamental research in bacteriology and microbiological chemistry relative to the development of improved malting and brewing processes. (3) New and improved methods of processing vegetable oils. (4) Chemical studies on the development of vegetable proteins for commercial use. (5) Research to extend the use of soybean and yeast products in the baking industry and to develop new products. (6) Studies on the composition of agricultural products, and the provision of analytical work for the other divisions.

The best wishes of all their many friends in Ste. Annes go with Dr. and Mrs. McFarlane to their new home in Toronto.

### New Appointment in Plant Pathology

Macdonald College announces the appointment of Dr. Eric O. Callen, formerly Assistant in the Department of Botany, University of Edinburgh, to the post of Assistant Professor of Plant Pathology.

Dr. Callen, a mycologist, received his B.Sc. degree with honours from the University of Edinburgh in 1936 and graduated with a Ph.D. degree





from the same university in 1939. In October, 1938, he was appointed to the staff of the Department of Botany, but left in May, 1941, to enlist. Until November, 1945, he served as Captain in the Army Intelligence Corps, and on demobilization returned to his post at the University of Edinburgh.

He is a Fellow of the Linnean Society, London, Fellow of the Botanical Society, Edinburgh, a member of

the British Mycological Society, and has published a number of papers in various scientific journals.

Keenly interested in sports, he has represented his House at hockey, lacrosse and rowing, and is interested in tennis, golf, and track sports. He is a past president of the Edinburgh University Biological Society and was last year president of the Edinburgh University Winter-sports Club.

## Reproduction Depends on the Soil

by J. R. Pelletier

ALL green feeds are helpful to reproduction. An acute shortage of organic matter leads to sterility, interrupts gestation and brings on abortion or weakness of the young. A ration that is complete, balanced and fortified with green stuff will guard against maladies that retard development, general well-being and reproduction.

The number, the size and the strength of the young depend greatly on the mother getting plenty of protein in her feed. Thus a pregnant sow needs 30% more protein than at other times.

Since protein is formed in the green parts of plants, the legumes are well provided with it if the soil has enough calcium, phosphorous and nitrogen. The plant first manufactures carbohydrates, or sugars and starches. These are formed into amino acids through combination with nitrogen, phosphorous and sulphur, and the amino acids are finally converted into proteins.

The best soils give pastures rich in protein, which permits females to come in heat regularly, conceive easily, and carry and feed their young.

Plants manufacture vitamins from their protein reserve, through the action of some inorganic elements of the soil. Thus nitrogen favours protein, from which is formed carotene and finally vitamin A. Most other fertilizers, except potassium and sodium, favour vitamin C. Rich soil gives a better growth, permitting a higher protein level in green plants, and an accumulation of vitamins A and C, which go together.

The animal body needs vitamin A for thrift. In animals that are undernourished the pituitary hormones are less generously secreted, resulting in late maturing of the follicles and heat at irregular intervals.

Vitamin C combats sterility in both males and females. Unlike vitamin A, it is synthesized in cattle, but its secretion is only possible when the animal has abundant vitamin A.

The role of Vitamin E in reproduction does not seem as important as was formerly claimed. Several types of domestic animals reproduce normally without it.

Other still unknown vitamins or other factors also influence ovulation, parturition and lactation, but to a lesser degree than those mentioned.

Plants contain 11 minerals which they take from the soil. But phosphorous, calcium, iodine and magnesium are particularly essential to reproduction, while cobalt and copper have indirect results.

Calcium and phosphorous are needed for normal development of the young. Reproductive failures have been observed where there were deficiencies of phosphorous or proteins. Calcium greatly stimulates formation of proteins. Lack of iron brings about a low iron content in the blood, resulting in anemia, which kills many young animals. Copper is also important for proper assimilation of iron by the blood. Iodine, zinc and copper have varied but essential effects in reproduction, while sodium, potassium, chlorine, magnesium and boron do not seem to be required for this purpose.

In an acute shortage of cobalt, ovulation and gestation may be normal, but the loss of young is high. Some serious troubles resulting from cobalt deficiency are anemia in sheep, pining in cattle and even abortion when the deficiency of cobalt is accompanied by lack of manganese and copper.

Rich pastures are a good guarantee of normal reproduction in all domestic animals. However, the fertility of our soils sinks with numerous harvests and high yields, and new complications arise. In spite of the application of fertilizers, our land is dropping in its supply of minerals that animals can assimilate. Moreover, the rare elements that are essential to reproduction are not returned to the soil through fertilization. More research is needed, to discover what can be done about this situation which threatens our very future.



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